

Appl. No. : **10/039,215**
Filed : **January 3, 2002**

REMARKS

In the Office Action mailed June 10, 2004, the Examiner rejected Claims 13, 25 and 39 under 35 USC §112 and further rejected Claims 1-47 under 35 USC §102 and 35 USC §103 in light of the Miki et al. reference (U.S. Patent No. 6,309,894), the Moise et al. reference (U.S. Patent No. 6,211,035), the Aoki et al. reference (U.S. Patent No. 6,297,085), the Shin et al. reference (U.S. Patent No. 6,103,567) or some combination thereof. By this paper, the Applicant has amended Claims 1, 10, 13, 22, 25, 34 and 39 in order to comply with the requirements of 35 USC §112 and also to distinguish the art of record. Hence, reconsideration of the above-captioned application in light of the amendments and remarks contained herein is now respectfully requested.

In the Office Action, the Examiner rejected Claims 13, 25 and 39 as failing to comply with 35 USC §112. By this paper, the Applicant has amended each of these claims to indicate that the via is no longer formed in the substrate, rather the via is formed in the interdielectric layer as described in the specification. The Applicant therefore submits that these claims comply with the requirements of 35 USC §112.

In the Office Action, the Examiner also rejected the claims under 35 USC §102 or §103 in light of the Miki, Moise, Shin and Aoki references. However, after carefully reviewing each of these references, the Applicant notes that none of these references teach the second conducting layer being oxidized such that the quantity of oxygen atoms within the upper electrode is greater than which is required for stoichiometric stability such that oxygen atoms in the second conducting layer absorb oxygen vacancies that migrate into the second conducting layer in the manner claimed by the Applicant.

In particular, while Miki discloses an oxygen rich interface layer interposed between the conductor and the dielectric layer, there is no discussion of the upper conducting layer having any increased concentration of oxygen such that oxygen vacancies that migrate through the interface layer into the second conductive layer can be absorbed by the excess oxygen atoms. As a consequence, the Miki reference neither discloses nor teaches this particular feature with regards to the second conductive layer.

After carefully reviewing each of the other references, there is no indication in any of the other references of oxidizing the second conductive layer past the point of stoichiometric stability such that excess oxygen vacancies can be absorbed in the second conducting layer. As a

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consequence, the Applicant submits that Claim 1 as amended is allowable over the art of record. By this paper, the Applicant has also amended Claims 10, 22 and 34 to include similar limitations to Claim 1. As a consequence, the Applicant believes that these claims are also allowable over the art of record.

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SUMMARY

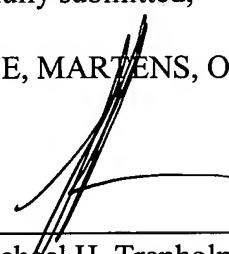
For the foregoing reasons, the Applicant believes that Claims 1, 10, 22 and 34 are allowable over the art of record. The Applicant further submits that the remaining claims define additional patentable subject matter and are further allowable due to their respective dependencies on Claims 1, 10, 22 and 34. The Applicant therefore believes that the above-captioned application is in condition for allowance and requests the prompt allowance of the same. Should there be any impediment to the prompt allowance that could be resolved by a telephone conference, the Examiner is respectfully requested to call the undersigned at the number shown below.

Please charge any additional fees, including any fees for additional extension of time, or credit overpayment to Deposit Account No. 11-1410.

Respectfully submitted,

KNOBBE, MARTENS, OLSON & BEAR, LLP

Dated: 10/12/04

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